

Welcome to

OPERA's WP3 Track - Network Analysis and Visualization













The OPERA project's WP3 explores new tools and concepts within the context of open research analytics. The main objective is to find the most relevant network analytics and visualizations that may support and complement classical research analytics and facilitate the inclusion of these in analytics platforms like VI VO.



Current progress and plans

OPERA WP3 - Network Analysis and Visualization

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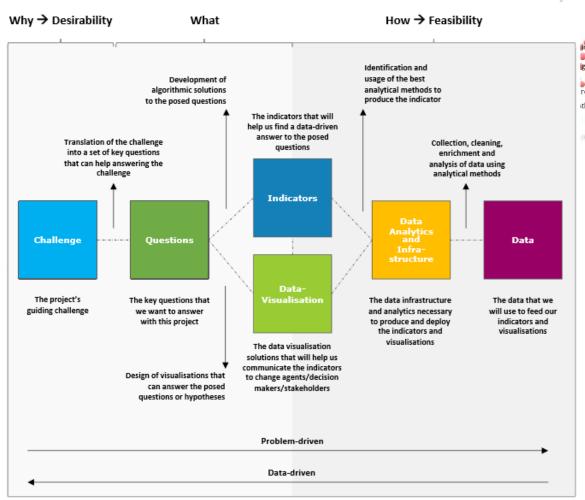
◯ OPERA WP3 – where we started

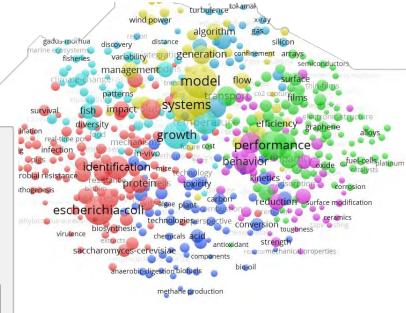




WEB OF SCIENCE™













By courtesy of Pedro Parraguez Ruiz, co-founder and CEO of Dataverz www.dataconomy.com/2018/10/the-cart-before-the-horse-in-data-science-projects-back-to-basics/

28 March 2019 **OPERA Workshop at DTU**



OPERA WP3 – where we are now

Why → Desirability What How → Feasibility

Establishing a 'Danish map of Science' investigating:

- The DK research area landscape
- The DK collaboration research landscape
- The impact of the DK research landscape

???

Questions

What research areas university and national level?

How are the universities collaborating?

What is the impact?

How has the research landscape evolved over time?

Indicators

No. of publications per research area, co-authoring, citations, affiliations, etc.

Network maps, with overlay facets and filters

Possibillity of exploring the map on publication level

Open data and systems

VOSviewer

Integration with the VIVO platform Data

WoS

Scopus

Dimensions

CRIS systems

Danish National Research Database

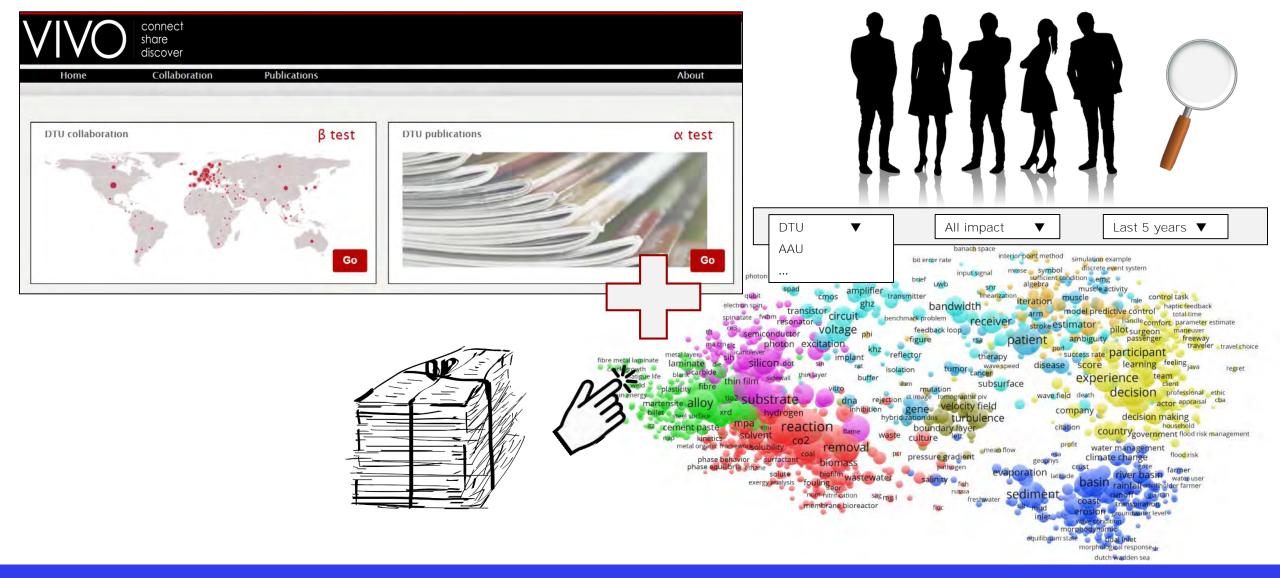
The Bibliometric Research Indicator (BFI)

28 March 2019

OPERA Workshop at DTU



◯ OPERA WP3 – where we are heading



28 March 2019 **OPERA Workshop at DTU**





DK Map of Science

WP 3 - Network analysis and visualization





- Predecessors
- WP 3 DK Map of Science
 - Data
 - Visualization
 - Improvements suggestions?







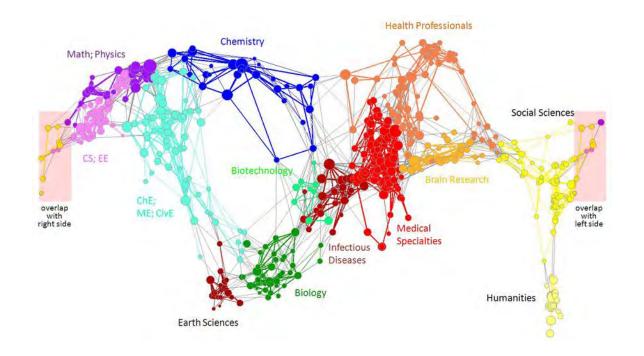
Science Maps



UCSD Map of Science (app. 2001-2010)

Börner K, Klavans R, Patek M, Zoss AM, Biberstine JR, Light RP, et al. (2012) Design and Update of a Classification System: The UCSD Map of Science. PLoS ONE 7(7): e39464.

https://doi.org/10.1371/journal.pone.0039464

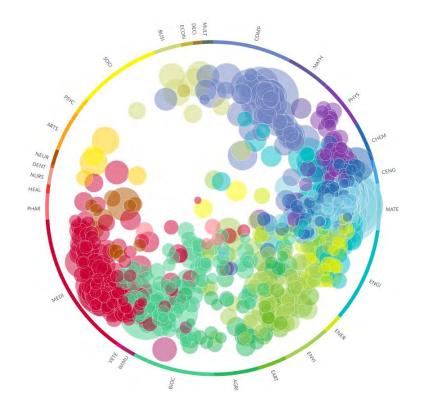








SciVal 95.764 Topics (World 2013-2018)





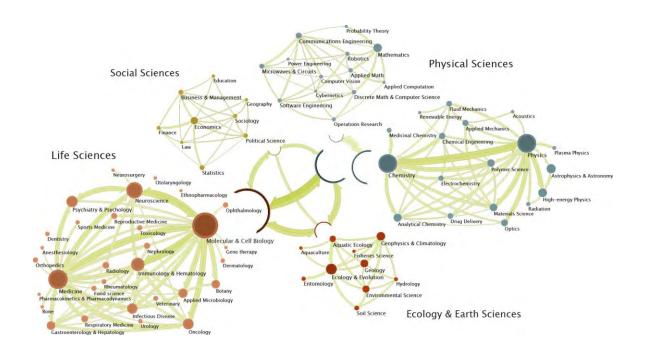


Science Maps

O B A

- Eigenfactor: Maps of Science
- http://www.eigenfactor.org/map/maps.php

AND MANY MORE...





OPERA DK Science Map



- Data from the Danish Bibliometric Research Indicator – https://bfi.fi.dk
- Time period: 2015-2017
- 157.516 entries
- 13.811 duplicate values
- Structure:

_	A	D
1	Kulturanalyse som refleksiv praksis	KU
2	Why Dora Left	KU
3	The Odyssey Approach for Optimizing Fede	AAU
4	Inverting the Telescope on Borders that Ma	KU
5	Inverting the telescope on borders that ma	SDU
6	Antonoid cartilage abdustion in sports has	MII

- Tool: VosViewer (CWTS Leiden)
 - Overlay term maps
- Different experiments
 - > All languages mixed
 - Only English



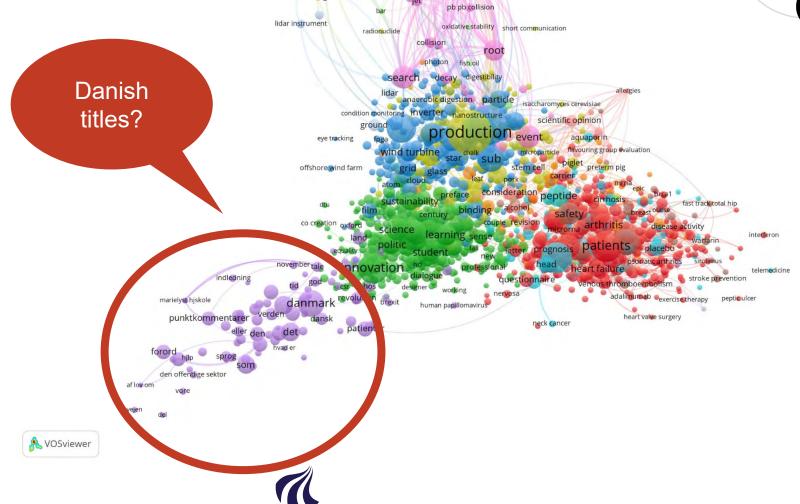
Interpretation of a Term Map (CWTS)

- Size:
 - The larger a term, the higher the frequency of occurrence of the term
- Distance:
 - In general, the smaller the distance between two terms, the higher the relatedness of the terms, as measured by co-occurrences
 - The horizontal and vertical axes have no special meaning; maps can be freely rotated and flipped
- Colors:
 - Colors indicate clusters of closely related terms
 - Overlay maps in our setting: Hot colors indicate



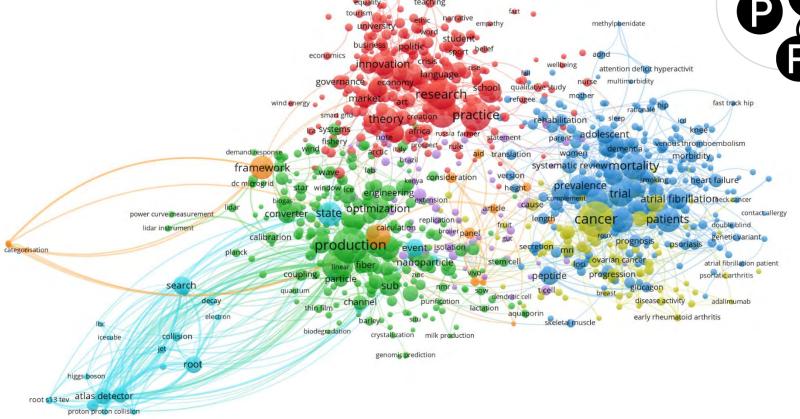






categorisation

English Titles

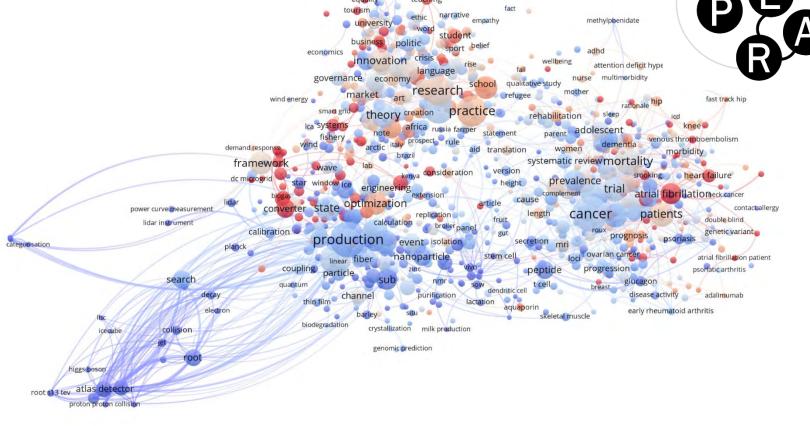




Items: 2635 | Clusters: 23 | Links: 16174 | Total link strength: 31530



English Titles - AAU

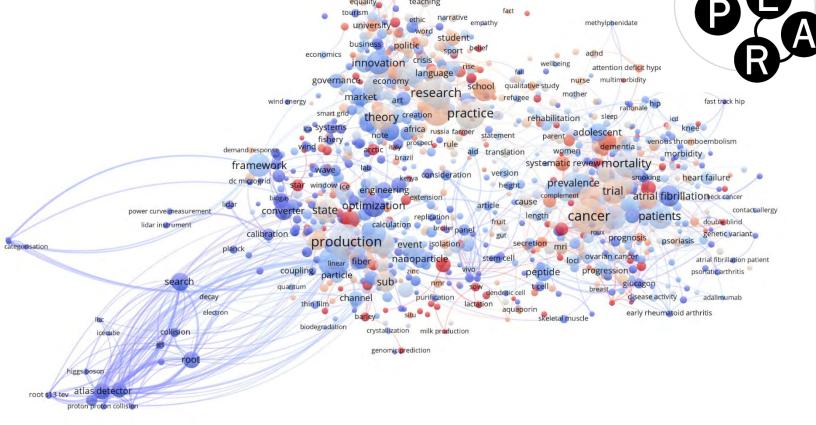








English Titles - AU

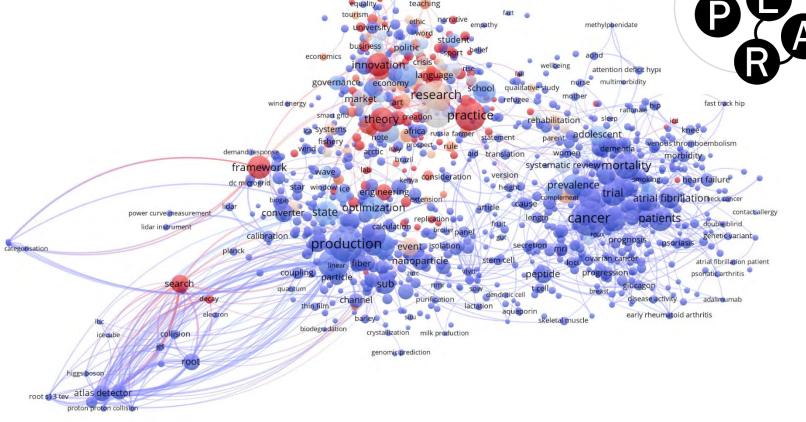








English Titles - CBS

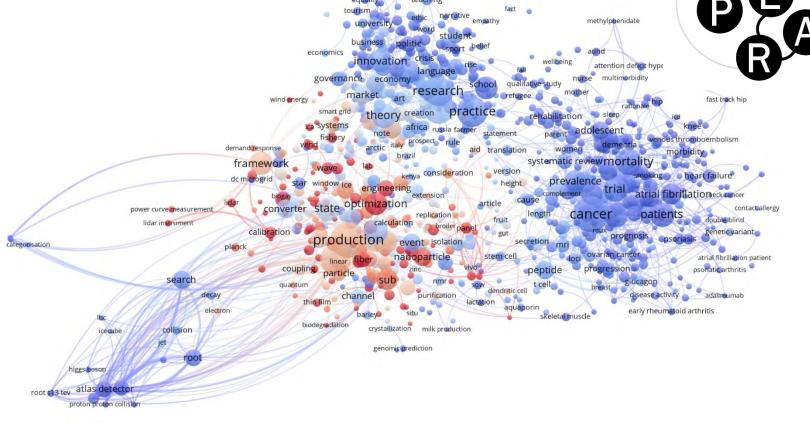








English Titles - DTU

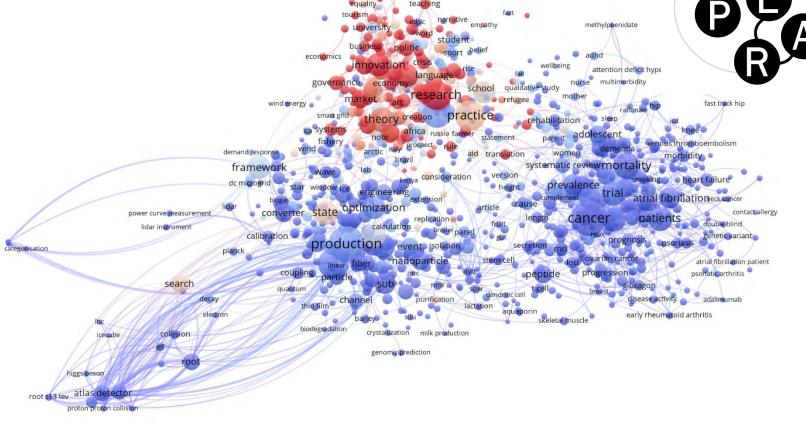








English Titles - ITU

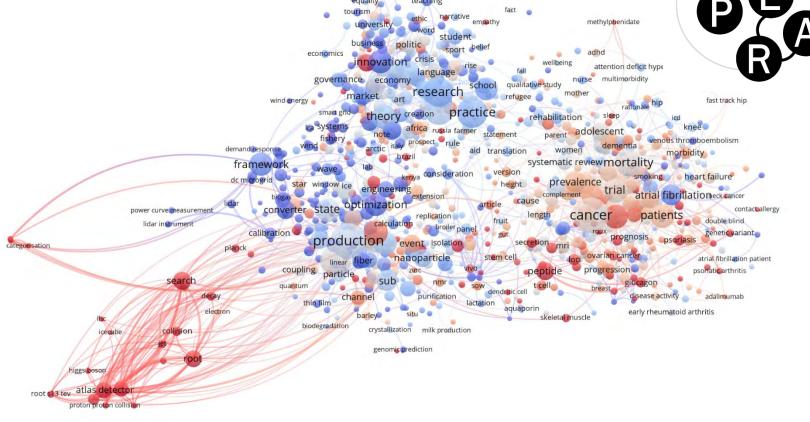








English Titles - KU

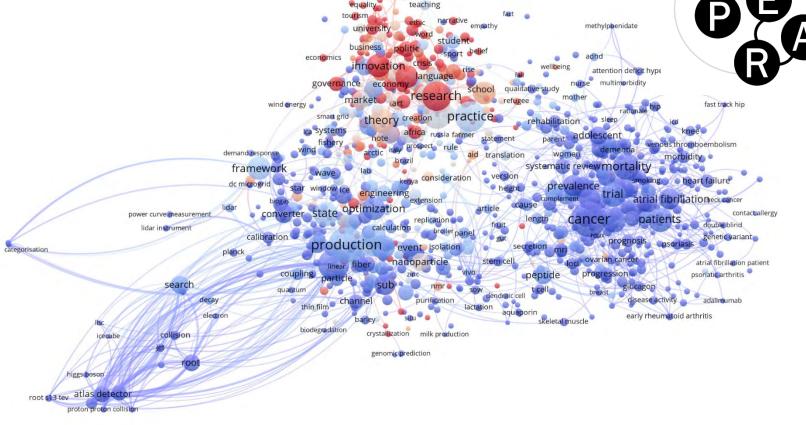








English Titles - RUC

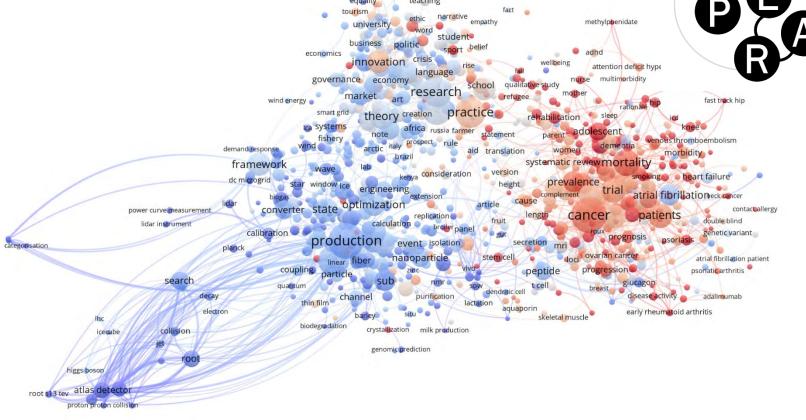








English Titles - SDU









Suggestions

- Translate Danish titles
- Is it good enough with titles only?
- What does the visualization tell us if anything?

